
Theses, Dissertations, and Other Capstone Projects

2011

Motivational Interviewing Training And Provider Proficiency

Jeremy Jay Waldo

Minnesota State University - Mankato

Follow this and additional works at: <http://cornerstone.lib.mnsu.edu/etds>

 Part of the [Public Health and Community Nursing Commons](#), and the [Public Health Education and Promotion Commons](#)

Recommended Citation

Waldo, Jeremy Jay, "Motivational Interviewing Training And Provider Proficiency" (2011). *Theses, Dissertations, and Other Capstone Projects*. Paper 219.

This Thesis is brought to you for free and open access by Cornerstone: A Collection of Scholarly and Creative Works for Minnesota State University, Mankato. It has been accepted for inclusion in Theses, Dissertations, and Other Capstone Projects by an authorized administrator of Cornerstone: A Collection of Scholarly and Creative Works for Minnesota State University, Mankato.

MOTIVATIONAL INTERVIEWING TRAINING AND PROVIDER PROFICIENCY

A thesis submitted In
Partial Fulfillment of the Requirements
for the Degree of
Master of Science
at Minnesota State University, Mankato

by
JEREMY J. WALDO, RN, BSN

MAY, 2011

Copyright

2011

Jeremy J. Waldo

MOTIVATIONAL INTERVIEWING TRAINING AND PROVIDER PROFICIENCY

JEREMY J. WALDO, RN, BSN

This thesis has been examined and approved by the following members of the thesis committee.

Diane E. Witt, Ph.D., RN, CNP, Advisor

Hans-Peter de Ruiter, Ph.D., RN

Abstract

MOTIVATIONAL INTERVIEWING TRAINING AND PROVIDER PROFICIENCY

The purpose of this descriptive study was to determine if there was a relationship between the amount and type of Motivational Interviewing (MI) training a *SagePlus* provider receives, motivation to utilize MI training, and the proficiency of the provider in using MI in lifestyle counseling in clinical practice. This study was comprised of 16 healthcare professionals who provide *SagePlus* lifestyle counseling interventions in clinics that participated in the Minnesota Department of Health (MDH) funded *SagePlus* program. A demographic questionnaire, modified Preventative Medicine Attitudes and Activities Questionnaire (PMAAQ) and Behaviour Change Counseling Index tool (BECCI) were utilized to assess provider's amount and type of MI training, provider's motivation to utilize MI, and proficiency while utilizing MI. Results showed that providers who had participated in MI training had higher proficiency scores when compared to providers who had no MI training, yet no statistical significance was established. When the types of MI training were compared, providers who had participated in video/self-study continuing education sessions had the highest proficiency score when compared to role play, discussion, and lecture. The results of this study provide evidence for educators and organizations to utilize to help them focus their resources to support MI training that results in higher MI provider proficiency. This looks like you are saying that the opportunity exists which may not be the case.

TABLE OF CONTENTS

	Page
LIST OF TABLES	vii
Chapter	
I. INTRODUCTION	1
Statement of the Problem	3
Purpose of the Study	3
Research Questions	4
Definition of Terms	4
Assumptions	4
Summary	5
II. REVIEW OF RELEVANT LITERATURE AND THEORETICAL FRAMEWORK	6
MI Training	6
Provider Proficiency	8
Provider Barriers	10
Knowledge	10
Attitudes	10
Skills	12
Behavior	13
Theoretical Framework	14
Transtheoretical Model of Change	14

Chapter	Page
Motivational Interviewing.....	15
Summary of Themes, Strengths, and Gaps in the Literature.....	17
III. RESEARCH METHODOLOGY	19
Design.....	19
Sample/Setting.....	20
Ethical Considerations.....	20
Tools.....	22
Data Collection Procedure.....	23
Data Analysis	24
Limitations.....	25
IV. ANALYSIS OF DATA	26
Description of Sample	26
Research Question 1	27
Research Question 2.....	27
Research Question 3.....	28
Research Question 4.....	30
Summary	30
V. DISCUSSION AND CONCLUSIONS.....	32
Background Literature.....	32
Method.....	32
Subjects	33
Tools.....	33

Chapter	Page
Analysis	33
Results	33
Discussion and Conclusion	34
Scope and Limitations	38
Implications for Practice	40
Implications for Research.....	40
Summary	41
REFERENCES	43
APPENDICES	
A. MDH IRB APPROVAL.....	51
B. MNSU IRB APPROVAL FORM	53
C. INFORMED CONSENT.....	55
D. PATIENT CONSENT TO OBSERVE PROVIDER SCRIPT.....	58
E. BEHAVIOUR CHANGE COUNSELING INDEX.....	60
F. PREVENTIVE MEDICINE ATTITUDES AND ACTIVITIES QUESTIONNAIRE (MODIFIED).....	62
G. PERMISSION FOR TOOL.....	65
H. DEMOGRAPHIC QUESTIONNAIRE	67
I. DEMOGRAPHIC TABLE.....	69

LIST OF TABLES

Table	Page
1. Reported Amount of MDH Training versus No MDH MI Training	28
2. Mean BECCI Scores by Format of MDH Training	30

CHAPTER I

INTRODUCTION

With the ever-changing world of healthcare, increasing emphasis is being placed on ways to promote healthy living. As one of its objectives, the U.S. Department of Health and Human Services (2010) identified the need to increase access to healthcare for individuals. This increased access would allow for providers to counsel clients on how lifestyle choices impact health, with the goal being to improve an individual's health and prevent disease. Primary care is a portal through which healthcare providers can play an integral role in facilitating change through education and interventions.

In 1991, with funds from the Centers for Disease Control and Prevention (CDC), Minnesota started the Sage Screening Program, a statewide comprehensive breast and cervical cancer screening program. The primary objective of SAGE is to increase the proportion of women between the ages of 40 and 64 who are screened for breast and cervical cancer (Minnesota Department of Health [MDH], 2010b). In 1995, Congress began funding a program through the CDC called the Well-Integrated Screening and Evaluation for Women Across the Nation (WISEWOMAN). This program was designed to help subsidize the costs of routine screening, education, and implementation of programs that help underinsured or low-income women, aged 40 to 64 years old, prevent chronic disease and make healthier life choices (CDC, 2010).

Currently, the CDC funds 21 WISEWOMAN programs which operate at the local level in states and tribal organizations. In 2004, Sage*Plus* was established in Minnesota, in conjunction with the SAGE program, as part of the CDC's WISEWOMAN program to

promote heart-health. This program provides standard preventative services, including blood pressure and cholesterol screening, in which women are tested, referred, and can take advantage of lifestyle programs that focus on nutrition, physical activity, and smoking cessation (CDC, 2010).

The *SagePlus* program offers its participants lifestyle-change counseling free of charge. A healthcare provider (physician, NP, PA, or RN) engages the individual in discussions related to their screening results and the potential impact they can have on the woman's health. The purpose of these discussions are to engage women, thus identifying and enhancing their internal motivation to change. While the discussions are occurring, the provider continuously assesses and responds to the woman's level of motivation or resistance to change. Together, the provider and the woman make a mutual decision about whether or not the woman is ready to make lifestyle changes (MDH, 2010a).

“Many health problems are related to lifestyle factors such as diet, exercise, and smoking” (Britt, Hudson, & Blampied, 2004, p. 147). Changing these behaviors can be difficult, with client's ambivalence and provider's lack of initiative toward behavior change playing significant roles. Lambe and Collins (2009) found that the incidence in which providers actually engage in lifestyle counseling to be as low as 1-5% internationally.

Motivational Interviewing (MI) is a technique that has emerged as an effective approach in aiding primary care providers in engaging behavior change (Lozano et al., 2010). MI, as defined by Miller and Rollnick (2002), is a “client centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence and involves the application of four basic principles: (1) Expressing

empathy, (2) Developing discrepancy, (3) Rolling with resistance, and (4) Supporting self-efficacy” (p. 218). This direct, client-centered counseling style is a technique that the MDH has recommended for use by the primary care providers who participate in the *SagePlus* programs.

Statement of the Problem

Assessing the provider’s proficiency or skill in the use of MI in clinical practice has been difficult. Historically, studies have placed an emphasis on the spirit of MI, rather than the techniques that comprise it (Moyers, Martin, Manuel, Hendrickson, & Miller, 2005). The amount of MI training that each primary care provider receives is not universal. This holds true within the MDH *SagePlus* program as well. Providers who conduct interventions as part of the *SagePlus* programs are directed to do so utilizing the MI style, yet a specific training program for these providers has not been developed.

In the past MDH has offered a nonmandatory, 2-day seminar on MI free of charge for *SagePlus* providers. The impact of these educational sessions on skill development, skill utilization, and efficiency is unknown (McCarley, 2009). In addition, due to factors, such as high turnover rates and work schedules, MDH acknowledges that some providers who conduct *SagePlus* interventions have not attended any formal MI training; these individuals are encouraged to utilize various MI websites as a means of self-study.

Purpose of the Study

The purpose of this study was to determine if there is a relationship between the amount and type of MI training a *SagePlus* provider receives and the proficiency of the provider in using MI to enact lifestyle changes in participating clients. Multiple studies have shown that providers who participate in MI training sessions do not retain skills

required for utilizing MI (Baer et al., 2004; Miller & Rollnick, 2002; Moyers et al., 2005). Baer et al. (2004) found that, on average, clinicians appeared to learn MI skills after attending a 2-day training session, but in a 2 month follow-up, 50% of clinicians were found to not be proficient on standards in half of the areas.

Research Questions

The research questions for this study are:

1. How much Motivational Interviewing training have *SagePlus* providers had?
2. Is there a relationship between the length of Motivational Interviewing training and Motivational Interviewing proficiency in clinical practice?
3. Is there a relationship between the type of Motivational Interviewing training and provider's Motivational Interviewing proficiency?
4. How motivated are *SagePlus* providers to use Motivational Interviewing?

Definition of Terms

Motivational Interviewing is a client centered, directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence (Miller & Rollnick, 2002).

Motivational Interviewing Proficiency is the ability to utilize MI techniques to direct the client's ambivalence as motivation for change.

Assumptions

1. MI is an efficient tool in engaging people to enact lifestyle changes.
2. While attending MI training sessions, *SagePlus* clinic providers are engaged in learning MI.

3. After attending MI training sessions, providers attempt to use MI strategies with *SagePlus* participants.
4. *SagePlus* clinic providers who use MI have received MI training.

Summary

Primary care providers are in a unique position to engage clients in lifestyle counseling. The MDH has taken the initiative to help train primary care providers who participate as part of their *SagePlus* programs in utilizing MI. With the study's underlying assumptions being identified, the purpose of this study is to gain further knowledge about what role MI training plays in impacting the proficiency of providers who utilize MI.

CHAPTER II

REVIEW OF RELEVANT LITERATURE AND THEORETICAL FRAMEWORK

The purpose of this study was to determine if there is a correlation between the amount of MI training a SagePlus provider receives and the proficiency of the provider in using MI to enact lifestyle changes in participating clients. Therefore, a literature review surrounding the aspects of this purpose was needed. There are varying types of literature on MI training programs and provider proficiency available. This chapter reviews the current literature regarding MI training, provider MI proficiency, and provider barriers. The chapter concludes by providing the theoretical framework for the study.

The study aims were reviewed for the years 1987 to 2010 using the Cumulative Index for Nursing and Allied Health Literature (CINAHL), the American Psychological Association's database (PsycINFO), and the National Library of Medicine's database (MEDLINE). Search terms were *Motivational Interviewing, Competence, Proficiency, Training, Effectiveness, and Evaluation*. The search resulted in 30 articles that were used for the purpose of examining the current literature on the problem.

MI Training

When discussing MI training, most often the emphasis is placed on the spirit of MI rather than the techniques that comprise it (Moyers et al., 2005). This fundamental emphasis on the spirit distinguishes the MI approach from many technique-orientated interventions, thus leaving open areas for interpretation when attempting to evaluate training programs. Miller and Rollnick (2002) emphasized that when a client is facing

feelings of ambivalence, skilled MI training can produce significant change in a client's behavior. The length of MI training programs and techniques for teaching MI are areas relevant for discussion.

Baer et al. (2004) through a survey of the Motivational Interviewing Network of Trainers (MINT) members, suggested that a 2-day workshop was the most common education modality requested by MINT trainers (p. 100). MINT consists of people who are trained as trainers by the leading experts on MI training, William R. Miller and Stephen Rollnick (Wagner & Connors, 2009).

Madsen, Loignon, and Lane (2009) found that MI training programs varied greatly. Of the 28 studies they reviewed, 7 were less than 8 hours, 16 were between 9 and 16 hours, and 1 was longer than 24 hours and required some extended follow-up (Madsen et al., 2009, p. 104). Of the 28 studies, 22 utilized didactic instruction and experiential exercises as the primary method of training (Madsen et al., 2009). In addition, role play and the use of a standard practice client were additional teaching strategies identified (Madsen et al., 2009).

In various situations training programs have attempted to conduct MI training in an experimental manner or otherwise thought of as a nontraditional manner. Experimental methods of learning are beneficial in helping providers to gain knowledge in modalities in which communication is involved (Aspegren, 1999; Kurtz, Silverman, & Draper, 1998). Lane, Hood, and Rollnick (2008) and Mounsey, Bovbjerg, White, and Gazewood (2006) attempted to differentiate the use of role play versus simulated clients as a superior way of teaching MI. Each method allowed the students to develop skills

with MI, but there was not a statistically significant difference in the amount of learning that occurred using the various methods.

Provider Proficiency

Proficiency of providers has been identified by Miller et al. (2005) as playing an important role in the ability to engage clients through the use of MI. The proficiency of providers who choose to use MI can have a direct impact on the lifestyle choice outcomes. Various studies have focused on evaluating the outcomes of MI training on provider proficiency (Baer et al., 2004; Baer et al., 2009; Rubel, Shepell, Sobell, & Miller, 2000).

Rubel et al. (2000) found that providers who were administered a pretest showed an improvement in knowledge, as evidenced by an increase on their posttest, after attending a 2-day MI workshop. When comparing the pretraining and posttraining knowledge responses of participants who attended a workshop conducted by Miller and Rollnick, providers showed an improvement ($p < .001$) on a measure of 15 items of knowledge about MI. Additionally, providers were given three case studies and asked to document how they would respond. In their written response, providers showed a significant increase in MI-consistent responses ($p < .02$) and a significant decrease in MI-inconsistent responses ($p < .001$). One could deduct from this response that if a provider was to engage in MI with a client directly after attending an MI training session, the provider could be considered proficient.

The relationship between MI training and provider proficiency has been evaluated by the Motivational Interviewing Skill Code (MISC) tool. This tool was developed to study changes in providers' clinical proficiency before and after MI

training. Miller and Mount (2001) utilized the MISC to evaluate the effectiveness of a 2-day MI training workshop attended by 22 probation counselors. The probation counselors' pretraining knowledge was assessed by having them complete a self-reported questionnaire. After attending the 2-day workshop, the probation counselors again were assessed by submitting a videotape within 2 days of an interview of an interaction with a standard pretend client actor and completing an additional questionnaire. At 3-months posttraining, the providers were asked to submit an actual work sample of an interview and to complete a final questionnaire. Reviewing the results of the MISC measures showed significant increases in MI knowledge and proficiency were present immediately after attending the 2-day training session and still present at the 3-month follow-up. A 47% increase in MI consistent responses was documented when reviewing pretraining to follow-up samples ($p < 0.001$).

Workshop versus self-training is an additional area identified in the literature as playing a role in provider's proficiency. According to Miller et al. (2004), providers who attended workshop training showed a substantial increase in proficiency immediately following the workshop when compared to the self-training groups. The gap in proficiency narrowed over time, yet the workshop group continued to have a higher proficiency rating when compared to the self-study group, thus showing support for the efficacy of training MI providers with a 2-day workshop versus a self-directed learning approach. Of note, Miller et al. (2005) indicated that this difference could be related to the fact that providers who attended a workshop on MI were more motivated to learn MI when compared to self-directed participants. It must be emphasized that even though a provider who attended a 2-day workshop showed increased proficiency initially, it is

unreasonable to expect a provider who attended one 2-day session will develop enduring proficiency in MI (Miller et al., 2005).

Provider Barriers

When evaluating the use of MI by the provider, it is important to assess the barriers that each provider identifies in the utilization of MI. What a provider identifies as being significant in utilizing MI will be a determining factor in whether or not a provider is motivated to learn MI, become or maintain proficiency in relation to MI, and ultimately engage a client in MI. In the literature it was identified that knowledge, attitudes, skills of delivering lifestyle counseling, and behavioral routines are barriers to effective utilization of MI (Jansink, Braspenning, van der Weijden, Elwyn, & Grol, 2010).

Knowledge

Lack of knowledge by the provider in relation to physical activity, smoking cessation, and diet was identified by multiple studies as a barrier to a quality lifestyle intervention (Ampt et al., 2009; Jansink et al., 2010; Lambe & Collins, 2009).

Attitudes

If a provider does not believe that the client being counseled will make the change in their health, then it was identified that the provider often lacked the internal motivation to fully engage the client in the spirit of MI (Ampt et al., 2009; Jacobsen, Rasmussen, Christensen, Engberg, & Lauritzen, 2005; Jansink et al., 2010; Lambe & Collins, 2009; Viadro, 2004). Ampt et al. (2009) identified that the providers' feelings of powerlessness, or lack of motivation, could be directly related to the lack of confidence in their ability to evoke healthy lifestyles changes among their clients. The level of

effectiveness felt by the provider directly affected how motivated the provider was in engaging in lifestyle counseling. Job satisfaction and professional growth were variables that had a direct influence in the provider's attitude and willingness to utilize MI in their practice, and was directly related to engagement and proficiency in MI (Berger, Otto-Salaj, Stoffel, Hernandez-Meier, & Gromoske, 2009).

The provider-client relationship has been identified in the literature as being influential in provider motivation to utilize MI. The fear of jeopardizing this relationship has been identified as having a direct impact on MI utilization in practice (Jacobsen et al., 2005; Jansink et al., 2010; Lambe & Collins, 2009).

If a provider does not understand why it is difficult to change a particular health behavior, then they may not be effective in motivating the client to change (Berger et al., 2009; Jansink et al., 2010). The provider continuing to remain empathetic is a vital component of MI. The provider may feel discouraged and empathy may be a difficult task to achieve. Empathy can be influential in helping providers to continue to engage in lifestyle counseling when the desired results are not reached (Jansink et al., 2010).

Time is a prominent variable affecting how providers interact with their clients. With the length of time a provider has to conduct a visit directing the need to deliver multiple interventions in a short amount of time, MI often becomes just another intervention being delivered (Resnicow et al., 2002). This delivery system has forced MI to be conducted in a nontraditional way, thus impacting the spirit of MI (Resnicow et al., 2002). Berger et al. (2009) indicated that with the already limited time for interactions, MI is often viewed as a new, time-consuming intervention, and providers either refuse or fail to conduct MI within the true spirit of MI.

Skills

Skill to develop lifestyle counseling is a necessary tool for any provider to develop, regardless of the intervention they are performing. MI is no different; not having necessary skills to engage in MI can be a major barrier for providers (Miller & Rollnick, 2002; Resnicow et al., 2002). Skill development, in relation to MI, can be a challenging task to accomplish because MI training does not focus solely on set of rules, but rather on the spirit of MI (Lambe & Collins, 2009; Miller & Rollnick, 2002; Resnicow et al., 2002). Many professions and providers claim to have adopted the use of MI in practice, yet frequently the providers have not engaged in the appropriate training necessary to become proficient in utilization or the spirit of MI.

The spirit of MI requires the provider to collaborate with the client instead of acting in the authoritative, prescriptive, instructional manner that providers have frequently become accustomed to (Miller & Rollnick, 2002; Rollnick, 2001; Thijs, 2007). An interaction in which a provider collaborates with the client is difficult for providers to accept, and often described by providers as not being a comfortable interaction (Berger et al., 2009). The neutrality in which MI is to be conducted allows for clients to enact lifestyle change on their own terms, ultimately contributing to a more effective lifestyle change (Miller & Rollnick, 2002).

Effective MI utilization requires the providers to identify the stage of change the client is in (Miller & Rollnick, 2002). This presents an area for the provider to potentially sabotage the client relationship. Jansink et al. (2010) found providers often had expectations of the client that were too inflated, thus making it difficult to adapt their counseling techniques to effectively utilize MI. With this, it is vitally important that the

provider utilize the spirit of MI with realistic expectations, and in a neutral nature, not the authoritative, prescriptive, instructional manner that providers frequently use.

Behavior

Providers often become creatures of habit; change in routine can create anxiety, fear, and apprehension. A provider spends years developing and refining the way in which they chose to deliver care. Changing this routine and behavior can be a large barrier to overcome, thus limiting the willingness of providers to embrace MI or to adhere to the spirit of MI (Jansink et al., 2010; Lambe & Collins, 2009). With this disruption in the provider's care delivery system, it has been found that providers often feel inclined to take over the responsibilities of the client too quickly, thus an appropriate sharing of responsibility does not occur and the spirit of MI is ultimately compromised (Jansink et al., 2010).

With the competing needs of the client taking precedence during a limited visit time, providers frequently find themselves feeling handicapped (Litaker, Flocke, Frolkis, & Stange, 2005; Miller & Rollnick, 2002). When the complexities of the problems overshadow the concerns of lifestyle counseling, limited effort is put into finding the appropriate time to address lifestyle counseling (Litaker et al., 2005). Litaker et al. (2005) suggested that a significant amount of time is needed during an encounter in order for a provider to address preventative care and/or engage in lifestyle counseling. Thus, providers need added education and assistance in developing a strategy that better prepares them to capitalize on lifestyle counseling opportunities during appointments (Litaker et al., 2005).

Theoretical Framework

MI, which evolved from the Transtheoretical Model (TTM), forms the conceptual framework for this study. The elements of MI guide this study to help determine if the amount of MI training directly impacts a provider's proficiency in MI utilization.

Understanding TTM provides the foundation needed to gain knowledge in understanding MI, thus providing the basis for embracing the spirit of MI and effective utilization.

Transtheoretical Model of Change

Prochaska and DiClemente developed the TTM, which consists of five stages that move along a continuum of an individual's desire to understand and change a current behavior (Casey, 2007; Shinitzky & Kub, 2001). "The belief that change involves a process, which occurs in increments, and involves specific, varied tasks is the heart of the TTM" (Miller & Rollnick, 2002, p. 201). The belief that change is a progression must be shared by each provider, placing the responsibility on the provider to assess the client's stage of change in order to further advance the client toward reaching their goal of lifestyle modification.

The first stage is precontemplation. This is when the client is at a state where change is not of interest or the client is unable to recognize the need for lifestyle modification, and it can be assumed change will not be accomplished within the next 6 months (Shinitzky & Kub, 2001). The second stage is contemplation. This is when the client begins to contemplate change, thus weighing the advantages and disadvantages of changing behavior. At this time the client may seek the collaboration of a healthcare provider, with the ultimate goal of making a change within the next 6 months (Shinitzky & Kub, 2001). The third stage is preparation. This is where the client has ultimately

made the commitment to change in the immediate future (usually within 1 month). The client has made the determination that the benefit of engaging in a behavior change outweighs the risk of not making a change. The client then prepares to take the action necessary (Shinitzky & Kub, 2001). The fourth stage is action. This is when the client actually takes action towards changing the behavior (Shinitzky & Kub, 2001). The fifth stage is maintenance. Here the client has been successful in making the lifestyle modification and remained so for approximately 3-6 months. The focus now shifts for the client to prevent relapses (Shinitzky & Kub, 2001). These particular stages of change are the primary building blocks that comprise the foundation for the development of MI (Miller & Rollnick, 2002).

Motivational Interviewing

MI was developed from the stages of change aspect of the TTM model by Miller and Rollnick in 1996 (Miller & Rollnick, 2002). The belief that change is a progression is a vital underpinning of MI. Together responsibility is shared by both provider and client; placing the responsibility on the provider-client relationship to identify and assess the client's stage of change. This nondirective counseling method works by helping clients examine and resolve ambivalence about making a change in their lifestyle health behaviors (Rubak, Sandbaek, Lauritzen, & Christensen, 2006; White, Gazewood, & Mounsey, 2007).

There are two phases to MI. Phase I consists of building a therapeutic relationship and Phase II consists of helping the client move through the stages of change to ultimately obtain their lifestyle change goal (Shinitzky & Kub, 2001). During Phase I there is no scripted means to develop the relationship. The provider focuses on

developing a creative way of aiding the client to develop an intrinsic motivation for change. Frequently the provider develops a history and understanding of the client, the provider then uses open-ended questions and reflective listening in hope of eliciting change talk and building intrinsic motivation for change (Miller & Rollnick, 2002). During Phase II the provider helps to strengthen the commitment for change and helps the client develop a plan for change through negotiation. Once the changes have occurred, there continues to be negotiation to help reassure that the client does not experience a relapse (Miller & Rollnick, 2002).

The two distinct phases of MI have four guiding principles that comprise the general spirit of MI. Principle 1 consists of expressing empathy by gaining understanding, acceptance, and engaging in reflective listening (Casey, 2007; Shinitzky & Kub, 2001). This client-centered empathic style is a fundamental and defining characteristic of MI. The reflective listening implores empathetic communication and should be carried throughout the MI process (Miller & Rollnick, 2002). It is important to note that ambivalence is a normal means of expressing empathy. Principle 2 involves developing a discrepancy between the client's current behavior and their desired goals; the goal is to get the client to identify the reasons for change (Casey, 2007; Shinitzky & Kub, 2001). The client should present the argument for change, one in which change is generally motivated by a perceived discrepancy between the client's current behavior and the goal or value the client hopes to achieve (Miller & Rollnick, 2002). Principle 3 involves rolling with resistance. New perspectives that the client describes are welcomed, the provider avoids arguing with the client for change, and answers to the resistance are encouraged to come from the client (Miller & Rollnick, 2002). Principle 4

involves supporting self-efficacy. The provider remains optimistic in the ability of the client; the client's belief in the possibility of change tends to be an important motivator. It is vital the client chooses and implements change (Miller & Rollnick, 2002).

It is vital to keep in mind that MI is a collaborative process, one that avoids a prescriptive approach (Miller & Rollnick, 2002). The provider needs to be cognizant that the intrinsic motivation for change is the underlying premise, and the job of the provider is to help evoke this potential.

Summary of Themes, Strengths, and Gaps in the Literature

Research has identified that training, evaluation, and MI proficiency endurance can be a difficult task. The assessments of these programs often occur across varying conditions thus making the transferability of such evaluations a difficult task (Baer et al., 2009). In addition, the lack of universally identified training programs leaves open the area of interpretation as to what is effective MI training. This is a theme that appeared throughout the literature.

More research is needed in the area of the impact of MI across different ethnic, age, and sociodemographic populations (Befort et al., 2008; Resincow et al., 2002). The literature lacks actual provider-client evaluations. The studies reviewed showed that when the proficiency of the provider was evaluated, it was either in a simulated setting or with a taped interview of a client (Baer et al., 2004; Miller et al., 2005; Moyers et al., 2005). Baer et al. (2004) showed that skills assessment is a reliable way to conduct MI evaluation, though assessment in this manner may not be representative of actual client MI encounters. The client-taped interview allows for the evaluation using an actual client setting, yet this type of evaluation lacks the inference of being a representative

client encounter based on the provider being able to select the best client encounter for submission for evaluation. Another limitation of research pertaining to MI is intervention fidelity; it has not generally been adequately assessed or controlled. Statistically, very few studies show any evidence of provider competence or fidelity to MI principles or practices (Moyers et al., 2005; Resnicow et al., 2002).

Being aware of the barriers of MI utilization and training will help providers engage clients in making healthy lifestyle changes. Provider's ability to understand the importance of MI while identifying their own potential barriers and lack of training proficiency ultimately helps encourage providers to strive for a higher standard of MI proficiency. This identification of lack of knowledge allows providers to utilize the public health and medical settings for engaging in MI as a means of improving lifestyle modification (Miller & Rollnick, 2002).

CHAPTER III

RESEARCH METHODOLOGY

The purpose of this study was to determine if there is a relationship between the amount and type of MI training a Sage*Plus* healthcare provider participates in and the proficiency of the provider in using MI as part of behavioral change counseling. The research questions for this study are:

1. How much Motivational Interviewing training have Sage*Plus* providers had?
2. Is there a relationship between the length of Motivational Interviewing training and Motivational Interviewing proficiency in clinical practice?
3. Is there a relationship between the type of Motivational Interviewing training and provider's Motivational Interviewing proficiency?
4. How motivated are Sage*Plus* providers to use Motivational Interviewing?

This chapter describes the design, sample, setting, ethical considerations, instruments, data collection, data analysis, and limitations.

Design

A quantitative design utilizing descriptive and inferential statistics guided data collection and analysis. Descriptive studies are designed to learn about an area of interest or specific topic as it is currently and can be used to identify any problems (Burns & Grove, 2009). The strength of a descriptive design is that it allows a researcher to gather data that provides a picture of the phenomena of concern; this data can then be used for further research. The weakness of descriptive design is that it does not allow testing the

data for statistical significances. Data collected is used for description only; no treatment of the study group is achieved.

The strength of inferential statistics is that it allows a researcher to test for significant differences between the measures of two groups. The weakness is that you need a larger sample size in order to accurately determine if statistical significance exists.

Sample/Setting

The sample consists of healthcare providers (physician, NP, PA, or RN) who have agreed to participate in the MDH's *SagePlus* program at their respective clinics. As a *SagePlus* provider, the assumption is that lifestyle counseling is conducted utilizing the spirit of MI. With this assumption, it is the understanding that the provider utilized MDH's MI continuing education sessions to gain proficiency in utilizing MI. Based on an MDH-generated list of providers who participate in *SagePlus* clinics, the goal was to observe up to 22 providers.

A private practice ambulatory setting consisting of 14 clinics throughout Minnesota which currently participate as part of MDH's *SagePlus* program was the setting for this study. Of the 14 clinics, 11 were selected by the MDH for inclusion. There are up to 22 healthcare providers (physician, NP, PA, or RN) who currently engage in lifestyle counseling at these selected clinics. The client population seen by providers in the *SagePlus* program consisted strictly of low income, under or uninsured women between the ages 40 and 64 years old who were enrolled in the *SagePlus* program.

Ethical Considerations

Data collection began after approval was received from both the MDH and Minnesota State University, Mankato, Institutional Review Boards (IRB) (see

Appendices A and B). A minimum of 3 days prior to the date of observation potential participants were sent two copies of the informed consent form (see Appendix C). Potential participants were encouraged to review the informed consent prior to date of observation. The consent form described of the intent of the study, benefits, potential physiological risks to both provider and client being observed, their rights regarding participation, and risk of altered provider-patient interaction due to observer influence. No physical risk has been identified. If the potential participant agreed to participate in the study, they signed one copy of the informed consent and returned it to the researcher while retaining the other copy for their records. On the day of observation the researcher verbally reviewed, in detail, the informed consent with each potential participant and gave them the opportunity to ask questions.

To protect confidentiality an alphanumeric code was used for data identification. With MDH's desire to track *SagePlus* provider data, the alphanumeric coded information carries the risk for individualized data disclosure and had the potential for negative ramifications from MDH. The key to the alphanumeric code was kept on a password protected computer by the researchers. Consent forms will be stored in the primary researcher's locked office for 2 years following completion of this study. Collected de-identified data will be stored in a password protected computer by the researchers. Only the researchers and the MDH will have access to the collected data.

Before observing the provider, a verbal consent explaining the intent of the study, benefits, potential risk, rights regarding willingness to have their appointment observed, and risk of observer influence on provider-patient interaction was obtained from *SagePlus* program participating clients (see Appendix D).

Tools

The Behavior Change Counseling Index (BECCI) tool is an 11-item tool developed at the University of Wales College of Medicine by Lane in 2002 (see Appendix E). Its purpose is to measure providers' consulting behavior and attitude during the use of behavior change counseling, an adaptation of MI. The responses to the 11 items on the BECCI are recorded on a 5-point Likert scale that ranges from 0 (*not at all*) to 4 (*a great extent*). Permission has been granted universally by Dr. Claire Lane to utilize the BECCI tool for use in rating and evaluation of skills involved in behavior change counseling, as evidenced by the *Who can use BECCI?* section of the manual for coding behavior change counseling, which states:

To use the BECCI, the rater should have a good basic knowledge of Behavior Change Counseling and the checklist. To ensure this, raters should undertake demographic reading, watch a training video and gain an understanding of how the checklist works in order. (University of Wales College of Medicine, 2002, p. 2)

MI proficiency is defined as a mean score of 3 (*a good deal*) or greater on The Behaviour Change Counseling Index (BECCI) tool.

Interrater reliability was established by having participating researchers use the BECCI tool for evaluation of MI vignettes. After observing each vignette, each researcher's BECCI tool assessment was compared. Differing answers were discussed in detail, until agreement between researchers was obtained. The researchers then scored additional vignettes in same fashion utilizing the BECCI tool. Interrater reliability was

attained when each of the three participating researchers' BECCI scores on each question of the 11 item BECCI tool were within 1 point different of each other.

The overall tool's internal consistency reliability as measured by Cronbach's coefficient is .71 (Lane et al., 2005, p. 169). The 11 items of the BECCI tool have an individual coefficient alpha ranging from .64 to .74. This evaluation of the BECCI tool's reliability and validity testing was conducted in 2002 by Lane et al. (2005) and found to be acceptable.

The Preventative Medicine Attitudes and Activities Questionnaire (PMAAQ) created by Yeazel consists of 85 items that addressed physicians' health prevention behaviors and provided insight into their preventive healthcare attitudes (see Appendix F). An amended version of this tool was used to assess provider's motivation to utilize MI. A provider with an average score of 3 or higher on a 5-point Likert scale was considered motivated to utilize MI. Permission was obtained to use the PMAAQ from Yeazel by email (see Appendix G). Internal consistency reliability as measured by the Cronbach coefficient alpha was 0.74 to 0.98.

In addition, practitioners were given a demographic questionnaire with 11 items (see Appendix H) that requested educational level, years of experience, profession, and length and type of MI training.

Data Collection Procedure

A list of clinics and potential participants was received from the MDH. Clinic managers were contacted to schedule dates and times that were mutually agreeable to both the clinic, clinic providers, and researcher when there would be *SagePlus* appointments scheduled. The visit occurred at a clinic that had agreed to participate in

MDH's *SagePlus* program. Each provider was sent a demographic questionnaire, modified PMAAQ, and informed consent a minimum of 3 days before scheduled *SagePlus* clinic visit. If the healthcare provider agreed to participate, each provider was encouraged to complete the demographic questionnaire and modified PMAAQ at their convenience before the scheduled *SagePlus* clinic visit. The questionnaires and consent form were then placed in an envelope. If the providers were unable to complete the requested demographic questionnaire and modified PMAAQ prior to researcher's scheduled visit, the providers were given the opportunity to complete each document either before the scheduled client observation or at a time of their convenience within the next 5 days and mail the results to the researcher in the provided addressed and stamped envelope.

The researcher then shadowed the provider during their *SagePlus* lifestyle counseling appointment. At the beginning of the appointment, the researcher gained verbal consent from the client to be present in the room to observe the provider. During observation, the researcher utilized the BECCI tool for the evaluation of the proficiency of MI. The BECCI was then inserted in the envelope with the other questionnaires.

Data Analysis

Initially the mean of the BECCI responses was computed for each provider. If a provider has a not applicable item (see Appendix E, questions 1, 9, 11), a mean will be computed without that item. This mean was used as the response for each not applicable item for that provider. A new mean was calculated and used in succeeding calculations. This process is called "mean substitution" and is recommended by the BECCI developers.

Each provider's mean score on the BECCI and demographic information was analyzed using The Statistical Package for the Social Sciences (SPSS) version 12. Descriptive statistics were calculated with emphasis placed on the frequency distribution, mean, minimum, and maximum. Further analysis utilized a *t* test to determine if was statistical significant between the length and type of MI training, and Sage*Plus* provider proficiency in clinical practice.

Limitations

Being part of a larger project evaluating the Sage*Plus* program was identified as a limitation; multiple researchers collected the data which could impact scoring on the BECCI tool. A further limitation included researchers' interrater reliability in utilization of the BECCI tool. In addition, the validity and reliability of the BECCI tool, which were found to be reasonable, were calculated from simulated actor consultations during training and could prove to be a limitation when applying its use to an actual client-provider interaction.

CHAPTER IV

ANALYSIS OF DATA

The purpose of this study was to determine if there was a relationship between the amount and type of MI training a *SagePlus* provider receives, motivation to utilize MI training, and the proficiency of the provider in using MI in lifestyle counseling. Providers were recruited from an MDH-generated list of providers (physician, NP, PA, or RN) who have agreed to participate in the MDH's *SagePlus* program at their respective clinics. This chapter provides a demographic profile of study participants and the results of the data analysis of each research question.

Description of Sample

The sample was comprised of 16 healthcare professionals who provide *SagePlus* lifestyle counseling interventions in clinics that participate in the MDH-funded *SagePlus* program. During 2 weeks of data collection, 16 of the potential 22 healthcare participants were observed carrying out *SagePlus* lifestyle counseling interventions and completed the demographic and PMAAQ questionnaires. There were two providers on leave during the data collection time, two who declined to participate, one who was unable to get a time scheduled for the student researcher to come to gather data, and one who did not return calls or electronic messages. The 16 providers who participated in this study provided *SagePlus* lifestyle counseling at 8 of the 11 clinics selected by MDH to be evaluated in this study.

The healthcare providers had a wide range of ages and years of experience in health care. The age of the providers ranged from 25 to 66 with a mean age of 45. There

were 15 females and 1 male. The highest degree completed by each provider ranged from an associate degree to a master's degree. Employment status ranged from volunteer to paid employees and casual on-call to full-time; with 6.3% as casual on-call, 12.5% as volunteer, 31.3% as part-time, and 50% as full-time. The number of years working in healthcare ranged from 3 to 35 years with a mean of 18 years. The number of years working with SagePlus clients ranged from .5 to 10 years with a mean of 3 years. The number of years the providers had been at their current clinics ranged from .75 to 16 years with a mean of 5 years (see Appendix I).

Research Question 1

The first research question was *How much Motivational Interviewing training have SagePlus providers had?* Of the 16 providers, 12 reported having MDH-sponsored training. Of those 12 providers, 2 attended a 1 day seminar, 8 attended a 2-day seminar, 2 participated in video/self-study, and 1 had another form of MDH-sponsored training. In addition to MDH-sponsored training, 4 providers attended additional types of MI training. Of these 4 providers, 1 attended classroom, self-study, and webinar sessions; 1 attended classroom and self-study sessions; and 1 attended self-study and internet sessions. Of the total 16 providers 2 reported having no MI training.

Research Question 2

Research question 2 was *What is the relationship between the length of MI training and MI proficiency in clinical practice?* Of the 16 providers, the researcher was unable to assess the Motivational Interviewing proficiency of 2 providers with the BECCI tool due to language barriers (both provider and patient were Spanish speaking). Of the remaining 14 providers, only 7 providers reported the total number of MI training hours

attended at a 1-day, 2-day, video/self-study, or other MDH training session. Of the 7 providers, 1 had 4 hours of MI training with video/self-study; 1 had 3 hours of training and 1 had 8 hours of training at a 1-day seminar; and 3 providers had 16 hours of training, and 1 had 24 hours of training at 2-day seminar.

When results were analyzed, providers who reported cumulative hours of attendance at either a 1-day, 2-day, or video/self-study showed a higher mean proficiency score than those with no MDH MI training (see Table 1). Further analysis with an independent samples *t*-test, showed no statistical significance between BECCI scores of providers who reported hours of attendance at a 1-day, a 2-day, video/self-study, or other MDH MI training versus providers who did not attend an MDH training session (see Table 1).

Table 1

Reported Amount of MDH Training versus No MDH MI Training

	N	Mean	SD	Range
Amount of MI training				
1-day seminar	2	2.97	.50205	2.61 – 3.32
2-day seminar	4	3.35	.37762	2.76 – 3.72
Video/Self-study	1	3.73	N/A	N/A
No MDH MI training	4	2.37	1.02629	.90 – 3.18

Research Question 3

Research question 3 was *Is there a relationship between the type of Motivational Interviewing training and provider's Motivational Interviewing proficiency?* Data collection showed that multiple providers engaged in multiple types of MI training. Of

the 16 providers, the researcher was unable to assess proficiency with the BECCI tool due to language barriers of 2 providers. Of the remaining 14, 7 attended lecture format continuing education sessions, which consisted of sitting and listening to a lifestyle counseling trainer; 7 attended video format continuing education sessions, which consisted of watching MDH-approved lifestyle counseling training material; 6 attended discussion format continuing education sessions, which consisted of open discussion where the providers were able to have open discussions with the lifestyle counseling trainers; 1 attended another format of MI training, which was not specified; and 8 attended role-playing format continuing education sessions.

When comparing these types of MI training with providers' proficiency scores, as measured on the BECCI tool, data analysis showed that providers, who participated in discussion, video, role playing, and other formats, all had a higher mean score on BECCI than those who participated in a lecture format continuing education seminar (see Table 2). Of these, providers who watched a video had the highest mean BECCI score.

Table 2

Mean BECCI Scores by Format of MDH Training

	N	Mean	SD	Range
Type of MI training				
Lecture	7	2.67	.90240	0.90-3.72
Discussion Format	6	2.97	.49259	2.36-3.72
Role Playing	8	3.01	.49140	2.36-3.72
Other MI training	1	3.05	N/A	N/A
Watching Video	7	3.08	.53359	2.36-3.73
No MI training	2	1.93	1.44957	.90- 2.96

Note: Some providers attended more than one format.

Research Question 4

Research question 4 was *How motivated are SagePlus providers to use Motivational Interviewing?* Of the 16 providers, 2 had a score of 1, which identified motivation as not being a barrier; 3 reported a score of 2, which showed motivation as a minimal barrier; 3 had a score of 3, which identified motivation as somewhat of a barrier; 2 had a score of 4, which showed that motivation was a moderate barrier; and 5 reported a score of 5, which showed that motivation was a significant barrier to using MI. The mean score of all providers assessed was 3.33 with a standard deviation of 1.50. Hence, these providers found motivation was somewhat of a barrier.

Summary

Although the goal sample size of 22 was not met, 16 providers were recruited for participation in the research study, yielding a participation rate of 73% during the data collection period of 2 weeks. The frequency counts, means, minimums, maximums,

t-tests, and standard deviations were calculated from the provider's BECCI scores and demographic questionnaires. With limited sample size, statistical significance was unobtainable, yet a relationship was seen between providers' mean scores and amount and type of MI training attended. Providers who participated in discussion, video, role playing, and other MI training formats, all had a higher mean score on BECCI than those who participated in a lecture format continuing education seminar. When results were analyzed, providers who reported cumulative hours of attendance at either a 1-day, 2-day, or video/self-study showed a higher mean proficiency score than those with no MDH MI training. Further study showed that providers found motivation was somewhat of a barrier to utilizing MI in clinical practice.

CHAPTER V

DISCUSSION AND CONCLUSIONS

The purpose of this study was to determine if there was a relationship between the amount and type of MI training a Sage*Plus* provider receives, motivation to utilize MI training, and the proficiency of the provider in using MI in lifestyle counseling.

Providers were recruited from an MDH-generated list of providers (physician, NP, PA, or RN) who have agreed to participate in the MDH's Sage*Plus* program at their respective clinics. This chapter provides a summary of the literature, methodology of study, analysis of data, discussions and conclusions, limitations, implications for practice, and implications for research.

Background Literature

The review of literature showed that research was lacking on the impact of MI across different ethnic, age, and sociodemographic populations (Befort et al., 2008; Resnicow et al., 2002). The literature lacks actual provider-client evaluations. The studies reviewed showed that when the proficiency of the provider was evaluated, it was either in a simulated setting or with a taped interview of a client (Baer et al., 2004; Miller et al., 2004; Moyer et al., 2004).

Method

A quantitative descriptive design utilizing descriptive and inferential statistics guided data collection and analysis. Subjects, tools, analysis, and results are summarized in this section.

Subjects

The sample was comprised of 16 healthcare professionals who provided *SagePlus* lifestyle counseling interventions in clinics that participated in the MDH-funded *SagePlus* program. The 16 providers who participated in this study provided *SagePlus* lifestyle counseling at 8 of the 11 clinics selected by MDH to be evaluated.

Tools

A demographic questionnaire, modified PMAAQ, and BECCI tool were used to assess provider's educational training with MI, motivation to utilize MI, and proficiency of utilizing MI during client-provider interactions.

Analysis

Using SPSS, the frequency counts, means, ranges, *t*-tests, and standard deviations were calculated from the providers' BECCI scores and demographic questionnaires. Further analysis utilized independent samples *t*-tests to determine that statistical significance was unobtainable, yet a relationship was seen between providers' proficiency scores and amount and type of MI training attended.

Results

Although the goal sample size of 22 was not met, 16 providers were recruited from 8 of the 11 prospective clinics for participation in the research study. This was a participation rate of 73% during the data collection period of 2 weeks. There were 2 providers who were on leave during the data collection time, 2 who declined to participate, 1 who was unable to get a time scheduled for the student researcher to come to gather data, 1 who did not return calls or electronic messages, and 2 providers were unable to have proficiency measured with the BECCI tool due to a language barrier. Of

the 14 providers, 10 had MDH-sponsored MI training, 2 had other sources of MI training, and 2 had no MI training.

Providers who participated in discussion, video, role playing, and other formats of MI training, all had a higher mean score on BECCI than those who participated in a lecture format of continuing education seminar. When results were analyzed, providers who reported cumulative hours of attendance at either a 1-day, 2-day, or video/self-study showed a higher mean proficiency score than those with no MDH MI training. Further study showed that providers found motivation was somewhat of a barrier to utilizing MI in clinical practice (see Table 1).

Discussion and Conclusion

The first research question was *How much Motivational Interviewing training have SagePlus providers had?* Of 16 providers, only 3 providers (18%) had no MI training. One provider did report not having MI training, yet checked lecture as the form of MI training that they had attended. The findings were consistent with the expectations of the MDH and the researcher's belief that the majority of providers using MI in lifestyle intervention have had some form of MI training. The expectation of MDH was obtained through verbal conversations with program directors. The conclusion drawn from the research is that providers are vested in learning MI; thus, it appears when given the opportunity, they chose to attend MI training sessions.

When evaluating how much MI training providers had, it was found that MI training was present and attended in a variety of fashions, ranging from self-study to organized 2-day seminars. This is something that the literature echoed. Miller and Rollnick (2002) pointed out that because the fundamental emphasis is placed on the spirit

of MI rather than the techniques that comprise it, training and interpretation does not follow the same type of stringent regimen that is present in many other technique-orientated interventions. Miller and Rollnick also emphasized that when a client is facing feelings of ambivalence, skilled MI training can produce significant change in a client's behavior.

Research question 2 was *Is there a relationship between the length of MI training and MI proficiency in clinical practice?* Of the 16 providers, the researchers were unable to assess proficiency with the BECCI tool due to language barriers on 2 providers. Of the 16 providers only 7 providers listed the total number of MI training hours attended at a 1-day seminar, 2-day seminar, video/self-study, or other MDH training session (see Table 2).

Providers who attended a 1-day seminar, a 2-day seminar, video/self-study, and other MDH MI training and who reported cumulative hours of attendance, all had a higher BECCI score when compared to providers who did not attend any MDH MI training session. When *t*-tests were computed, no statistically significant difference was found. The BECCI mean scores of providers who attended MI training at a 1-day seminar, 2-day seminar, and video/self-study ranged from 2.61 to 3.73 (see Table 1).

The provider who completed video/self-study had the highest BECCI score. The results of data analysis did not support what was found in the literature. According to Miller et al. (2004), providers who attended workshop training showed a substantial increase in proficiency immediately following the workshop when compared to the self-trained providers. The gap in proficiency narrowed over time, yet the workshop group continued to have a higher proficiency rating when compared to the self-study group,

thus showing support for the efficacy of training MI providers with a 2-day workshop versus a self-directed learning approach.

The findings were not in line with the researcher's expectations. Though the significance of the finding appeared to be skewed due to the sample size, it was surprising that video/self-study groups had the highest proficiency level (see Table 1).

When using the BECCI tool to assess MI proficiency, which is a mean BECCI score of 3 (*a good deal*) or greater, one could conclude from these results that if a provider were to attend a 1-day MI training session, theoretically, the provider would not be proficient in utilizing MI. If a provider was to engage in video/self-study, they would be likely to have a higher proficiency level. Regardless of the total amount of training attended, providers who attended MI training had a higher BECCI score than providers who had no MI training (see Table 1).

Research question 3 was *Is there a relationship between the type of Motivational Interviewing training and provider's Motivational Interviewing proficiency?* Data collection showed that several providers engaged in multiple types of MI training (see Table 2). When comparing these types of MI training with providers' proficiency scores, as measured by the BECCI tool, data analysis showed that providers who participated in video and role playing had BECCI scores with a proficiency rating greater than 3. The providers who participated in a lecture and discussion format had a lower score on the BECCI tool suggested that not being proficient in utilizing MI (see Table 2). Statistical significance was not established. Lane et al. (2008) and Mounsey et al. (2006) attempted to differentiate the use of role play versus simulated clients as a superior way of teaching MI. Each method allowed the students to develop skills with MI, but there was not a

statistically significant difference in the amount of learning that occurred using the various methods.

Though the significance of the finding appeared to be skewed due to the sample size, the researcher was surprised that lecture had the lowest BECCI score and video/self-study had the highest BECCI score. With instructional institutions using lecture as means of teaching, one could question if these findings would be transferable to lecture format of teaching present in technique-orientated interventions.

When using the BECCI tool to assess MI proficiency, which is a mean BECCI score of 3 (*a good deal*) or greater, one could conclude from these results that if a provider was to attend a lecture or discussion format alone as a means of learning MI, theoretically, the provider would not be proficient in utilizing MI. Regardless of the type of training attended, providers who had MI training had a higher BECCI score than providers who had no MI training (see Table 2).

Research question 4 was *How motivated are SagePlus providers to use Motivational Interviewing?* Of the 16 providers, 2 had a score of 1 which identified motivation as not being a barrier; 3 reported a score of 2, which showed motivation as a minimal barrier; 3 had a score of 3, which identified motivation as somewhat of a barrier; 2 had a score of 4, which showed that motivation was a moderate barrier; and 5 reported a score of 5, which showed that motivation was a significant barrier to using MI. The mean score of all providers assessed was 3.33 with a standard deviation of 1.50. Hence, providers deemed motivation was somewhat of a barrier.

These findings were in line with what the researcher expected to find and was echoed in the literature. If a provider does not believe that the client being counseled will

make the change in their health, then it was identified that the provider often lacked the motivation within to fully engage the client in the spirit of MI (Ampt et al., 2009; Jacobsen et al., 2005; Jansink et al., 2010; Lambe & Collins, 2009; Viadro, 2004). Ampt et al. (2009) identified that the provider's feelings of powerlessness, or lack of motivation, could be directly related to the lack of confidence in their ability to evoke healthy-lifestyles changes among their clients and indicated that the level of effectiveness felt by the provider directly affected how motivated the provider was in engaging in lifestyle counseling.

Prochaska and DiClemente developed the TTM, which is the underlying theoretical framework on which MI is based. "The belief that change involves a process, which occurs in increments, and involves specific, varied tasks is the heart of the TTM" (Miller & Rollnick, 2002, p. 201). The belief that change is a progression must be shared by each provider, placing the responsibility on the provider to assess the client's stage of change in order to further advance the client toward reaching their goal of MI lifestyle intervention. It is felt that the results of the study emphasized the belief that the progression must be shared by the provider. A provider taking initiative to engage in MI training in order to maintain proficiency could argue that this is the provider's way of sharing the responsibility to help move the client through the stages of change.

Scope and Limitations

The information from the study cannot be generalized. Though the data showed that the providers who participated in MI training had higher BECCI scores than providers who did not have MI training, no statistical significance was established. The

data also showed that some formats of MI training were superior to others in terms of BECCI scores; once again no statistical significance was established.

Multiple limitations were present during this study. The first one identified was interrater reliability. Though the researcher attempted to compensate for interrater reliability by having participating researchers use the BECCI tool for evaluation of MI vignettes until each item of the 11-item BECCI tool was within 1 point of each other, having multiple researchers involved in collection of data poses the risk of decreased interrater reliability. A second limitation was the sample size. With a limited number of available providers to evaluate, the size of the sample did not allow for statistical significance to be established. The provider's reactivity due to the awareness that they were being observed proved to be a threat to the internal validity and thus a limitation in this study. Readability of the demographic tool was a limitation of this study. Many of the providers failed to correctly complete the demographic questionnaire. Many of the observations were conducted with language interpretation, thus increasing the opportunity for loss of validity through translation and were ultimately considered a limitation. The fact that the BECCI tool's validity and reliability was established on simulated client interactions could also be considered a limitation of the study. Researcher bias was the last limitation identified. Each provider had the opportunity to discuss their individual feelings about being observed and MI in general before each provider observation. This interaction had the potential to bias the researcher during the observation period.

Implications for Practice

Proficiency of providers has been identified by Miller et al. (2005) as playing an important role in the ability to engage clients through the use of MI. The proficiency of providers who choose to use MI can have a direct impact on the lifestyle-choice outcomes. The data presented in this study helps to strengthen the thought that MI training improves provider's proficiency in utilizing MI. Comparing the different types and amounts of MI training allows for educators and organizations, such as the MDH, to focus their resources and energy on frequency, amount, and type of MI training that were identified as having higher provider proficiency scores on the BECCI tool. In addition, educators and organizations could focus resources on helping to further identify ways to help decrease the barrier of motivation to use MI in practice.

Placing special focus on a tailored type of education program could be beneficial to both the client and the provider. With individuals learning information in different formats, having an education program that meets the needs of the provider's desired medium of learning material could improve proficiency and compliance. This improved proficiency could translate into aiding clients in making lifestyle change.

Implications for Research

Various studies have focused on evaluating the outcomes of MI training on provider proficiency (Baer et al., 2004; Baer et al., 2009; Rubel et al., 2000). The studies reviewed showed that when the proficiency of the provider was evaluated, it was either in a simulated setting or with a taped interview of a client (Baer et al., 2004; Miller et al., 2004; Moyer et al., 2004). The fact that this study was conducted on actual provider-client interactions adds to the body of knowledge about MI proficiency, thus opening the

door for future research. Future research opportunities are available to expand on this body of knowledge. Prospective researchers have the opportunity to expand the sample size of the providers in hopes of developing statistical significance, thus helping to determine ways to increase provider's proficiency in utilizing MI in lifestyle interventions.

Looking at the relationships between different providers' degrees and their individual BECCI scores allows for additional research questions to be developed as well. Future researchers could study more in depth the specific material that each provider used as an educational medium, in hopes of determining the relationship to proficiency scores.

If a researcher was to attempt to recreate this study, emphasis should be placed on increasing the sample size in hopes of obtaining statistical significance. Limiting the amount of preobservation dialogue as well as pre-announcement of visits could be beneficial in decreasing the limitations of researcher's bias and reactivity that were present in this study.

Summary

The assessments of these programs often occur across varying conditions thus making the transferability of such evaluations a difficult task (Baer et al., 2009). The study highlighted limitations that were present during the implementation of the process, yet relational data was observed showing that types and amounts of MI training do impact providers proficiency in utilizing MI. Though this study's sample size did not allow for statistical significance to be established, it did provide the groundwork for the advancement of nursing knowledge, in particular, highlighting the importance of training

providers in the technique of MI in order to gain appropriate proficiency. This advancement in knowledge opens the door for future researchers to expand this study in hopes of further establishing the relationship between amount and type of MI training and provider proficiency in utilizing MI.

REFERENCES

REFERENCES

- Ampt, A. J., Amoroso, C., Harris, M. F., McKenzie, S. H., Rose, V. K., & Taggart, J. R. (2009). Attitudes, norms and controls influencing lifestyle risk factor management in general practice. *BMC Family Practice, 10*(59), 1-8. doi: 10.1186/1471-2296-10-59
- Aspegren, K. (1999). BEME guide no 2: teaching and learning communication skills in medicine: A review with quality grading of articles. *Medical Teacher, 21*(6), 563-570.
- Baer, J. S., Rosengren D. B., Dunn, C. W., Wells, E. A., Ogle, R. L., & Hartzler, B. (2004). An evaluation of workshop training in motivational interviewing for addiction and mental health clinicians. *Drug and Alcohol Dependence, 73*, 99-106.
- Baer, J. S., Wells, E. A., Rosengren, D. B., Hartzler, B., Beadnell, B., & Dunn, C. (2009). Agency context and tailored training in technology transfer: A pilot evaluation of motivational interviewing training for community counselors. *Journal of Substance Abuse Treatment, 37*, 191-202.
- Befort, C. N., Nollen, N., Ellerbeck, E. F., Sullivan, D. K., Thomas, J. L., & Ahluwalia, J. S. (2008). Motivational interviewing fails to improve outcomes of a behavioral weight loss program for obese African American women: A pilot randomized trial. *Journal of Behavioral Medicine, 31*, 367-377. doi: 10.1007/s10865-008-9161-8

- Berger, L. K., Otto-Salaj, L. L., Stoffel, V. C., Hernandez-Meier, J., & Gromoske, A. N. (2009). Barriers and facilitators of transferring research to practice: An exploratory case study of motivational interviewing. *Journal of Social Work Practice in the Addictions, 9*(2), 145-162. doi: 10.1080/15332560902806199
- Britt, E., Hudson, S. M., & Blampied, N. M. (2004). Motivational interviewing in health settings: A review. *Patient Education and Counseling, 53*, 147-155.
- Burns, N., & Grove, S. K. (2009). *The practice of nursing*. St. Louis, MO: Saunders.
- Casey, D. (2007). Using action research to change health-promoting practice. *Nursing and Health Sciences, 9*, 5-13. doi: 10.1111/j.1442-2018.2007.00297.x
- Centers for Disease Control and Prevention. (2010). WISEWOMAN-Well-Integrated Screening Evaluation for Women Across the Nation. Retrieved from <http://www.cdc.gov/wisewoman/>
- Jacobsen, E. T., Rasmussen, S. R., Christensen, M., Engberg, M., & Lauritzen, T. (2005). Perspectives on lifestyle intervention: The views of the general practitioners who have taken part in a health promotion study. *Scandinavian Journal of Public Health, 33*(4), 4-10. doi: 10.1080/14034940410028181
- Jansink, R. B., Braspenning, J., van der Weijden, T., Elwyn, G., & Grol, R. (2010). Primary care nurses struggle with lifestyle counseling in diabetes care: A qualitative analysis. *BMC Family Practice, 11*(41), 1-7.
- Kurtz, S., Silverman, J., & Draper, J. (1998). *Teaching and learning communication skills in medicine*. Oxford: Radcliffe Medical.
- Lambe, B., & Collins, C. (2009). A quantitative study of lifestyle counselling in general practice in Ireland. *Family Practice, 27*, 219-223. doi: 10.1093/fampra/cmp086

- Lane, C., Hood, K., & Rollnick, S. (2008). Teaching motivational interviewing: Using role play as effective as using simulated patients. *Medical Education*, 42, 637-644.
- Lane, C., Huws-Thomas, M., Hood, K., Rollnick, S., Edwards, K., & Robling, M. (2005). Measuring adaptations of motivational interviewing: The development and validation of the behavior change counseling index (BECCI). *Patient Education and Counseling*, 56, 166-173.
- Litaker, D. F., Flocke, S. A., Frolkis, J. P., & Stange, K. C. (2005). Physicians' attitudes and preventive care delivery: Insights from the DOPC study. *Preventive Medicine*, 40, 556-563. doi: 10.1016/j.ypmed.2004.07.015
- Lozano, P., McPhillips, H. A., Hartzler, B., Robertson, A. S., Runkle, C., Scholz, K. A., ...Mieckhefer, G. M. (2010). Randomized trial of teaching brief motivational interviewing to pediatric trainees to promote healthy behaviors in families. *Archives of Pediatrics and Adolescent Medicine*, 164 (6), 561-566.
- Madsen, M. B., Loignon, A. C., & Lane, C. (2009). Training in motivational interviewing: A systematic review. *Journal of Substance Abuse Treatment*, 36, 101-109.
- McCarley, P. (2009). Patient empowerment and motivational interviewing: Engaging patients to self-manage their own care. *Nephrology Nursing Journal*, 36(4), 409-413.
- Miller, W. R., & Mount, K. A. (2001). A small study of training in motivational interviewing: Does one workshop change clinician and client behavior? *Behavioural and Cognitive Psychotherapy*, 29, 457-471.

- Miller, W., & Rollnick, S. (2002). *Motivational Interviewing: Preparing People for Change*. New York, NY: The Guilford Press.
- Miller, W. R., Yahne, C. E., Moyers, T. B., Martinez, J., & Pirritano, M. (2005). A randomized trial of methods to help clinicians learn motivational interviewing. *Journal of Consulting and Clinical Psychology, 72*(6), 1050-1062.
- Minnesota Department of Health. (2010a). *SAGE: Sage Program Information*. Retrieved from <http://www.health.state.mn.us/divs/hpcd/ccs/mbcccp.htm>
- Minnesota Department of Health. (2010b). *SagePlus: Eligibility*. Retrieved from http://www.health.state.mn.us/divs/hpcd/ccs/sageplus/s_plus_eligib.htm
- Mounsey, A. L., Bovbjerg, V., White, L., & Gazewood, J. (2006). Do students develop better motivational interviewing skills through role-play with standardised patients or with student colleagues? *Medical Education, 40*, 775-780.
- Moyers, T. M., Martin, T., Manuel, J. K., Hendrickson, S. M., & Miller, W. R. (2005). Assessing competence in the use of motivational interviewing. *Journal of Substance Abuse Treatment, 28*, 19-26. doi: 10.1016/j.jsat.2004.11.001
- Resnicow, K. D., DiIorio, C., Soet, J. E., Borrelli, B., Hecht, J., & Ernst, D. (2002). Motivational interviewing in health promotion: It sounds like something is changing. *Health Psychology, 21*(5), 444-451. doi: 10.1037//0278-6133.21.5.444
- Rollnick, S. (2001). Comments on Dunn et al.'s "The use of brief interventions adapted from motivational interviewing across behavioral domains: A systematic review". *Addiction, 96*(12), 1769-1775. doi: 10.1080/09652140120089517

- Rubak, S., Sandbaek, A., Lauritzen, T., & Christensen, B. (2006). An education and training course in motivational interviewing influence: GP's professional behavior. *British Journal of General Practice*, *55*, 429-436.
- Rubel, E., Shepell, W., Sobell, L., & Miller, W. (2000). Do continuing educational workshops improve participatns skills? Effects of a motivational interviewing workshop on substance-abuse counselor's skills and knowledge. *Behavioral Therapist*, *23*, 73-77.
- Shinitzky, H. E., & Kub, J. (2001). The art of motivating behavior change: The use of motivational interviewing to promote health. *Public Health Nursing*, *18*(3), 178-185. doi: 0737-1209/01
- Thijs, G. (2007). GP's consult & health behaviour change project: Developing a programme to train GPs in communication skills to achieve lifestyle improvements. *Client Education and Counseling*, *67*, 267-271. doi: 10.1016/j.pec.2007.05.002
- U.S. Department of Health and Human Services. (2010). *Healthy People 2010*. Retrieved from <http://www.healthypeople.gov>
- University of Wales College of Medicine. (2002). *The behavior change counseling index (BECCI). Manual for coding behavior change counseling*. Retrieved from <http://www.motivationalinterview.org/library/BECCIManual.pdf>
- Viadro, C. I. (2004). Taking stock of WISEWOMAN. *Journal of Women's Health*, *13*(5), 480-483.
- Wagner, C., & Connors, W. (2009). *Motivational Interviewing: What is the MINT?*
Retrieved from <http://www.motivationalinterview.org/training/mint.htm>

White, L. L., Gazewood, J. D., & Mounsey, A. L. (2007). Teaching students behavior change skills: description and assessment of a new motivational interviewing curriculum. *Medical Teacher*, 29, e67-e71. doi: 10.1080/01421590601032443

APPENDICES

APPENDIX A
MDH IRB APPROVAL

Thank you for contacting the Department of Health's IRB regarding the study titled "Minnesota Department of Health Sage*Plus* program evaluation: Motivational Interviewing use and barriers to use in lifestyle counseling interventions." After reviewing the material, we find that the study you are proposing is program evaluation of a public health program and does not constitute research as defined by federal regulations. The primary intent is not to create "generalizable knowledge" but to monitor and improve the operations and process of a public health program. This study does not need further review by the Department of Health's IRB.

Please feel free to contact me if you want to discuss this study further.

Sincerely,

Pete Rode
IRB Administrator

APPENDIX B
MNSU IRB APPROVAL FORM



Diane E. Witt, Ph.D.
 360 Wissink Hall
 School of Nursing
 Minnesota State University, Mankato
 Mankato, MN 56001

Joan Grotewold
 1807 7th Street SW
 Rochester, MN 55902

Heidi Sannes
 1270 Parkside Lane
 Waconia, MN 55387

Jeremy Waldo
 860 Balsam CT NE
 Pine Island, MN 55963

March 4, 2011

Dear Diane, Joan, Heidi, and Jeremy:

Your proposed changes to your Institutional Review Board (IRB) approved research (Log #3757 – “Minnesota Department of Health SagePlus program evaluation: Motivational Interviewing use and barriers to use in lifestyle counseling interventions”) have been accepted as of March 4, 2011. Thank you for remembering to seek approval for any changes in your study.

If you make additional changes in the research design, funding source, consent process, or any part of the study that may affect participants in the study, you will have to reapply for approval. Should any of the participants in your study suffer a research-related injury or other harmful outcome, you are required to report them to the IRB as soon as possible.

The approval of your changes is attached to your original proposal; therefore, the original approval date has not changed. When you complete your data collection, or should you discontinue your study, you must notify the IRB. Please include your log number with any correspondence with the IRB.

This approval is considered final when the full IRB approves the monthly decisions and active log. The IRB reserves the right to review each study as part of its continuing review process. Continuing reviews are usually scheduled. However, under some conditions the IRB may choose not to announce a continuing review or a modification.

I wish you success in your research.

Cordially,

A handwritten signature in cursive script that reads "Patricia Hargrove".

Patricia M. Hargrove, Ph.D.
 IRB Coordinator
 Cc: File

COLLEGE OF GRADUATE STUDIES AND RESEARCH
 115 ALUMNI FOUNDATION CENTER · MANKATO, MN 56001
 PHONE 507-389-2321 (V) · 800-627-3529 OR 711 (MRS/TTY) · FAX 507-389-5974

A member of the Minnesota State Colleges and Universities System. Minnesota State University, Mankato is an Affirmative Action/Equal Opportunity University.

APPENDIX C
INFORMED CONSENT

Minnesota Department of Health Sage*Plus* Program Evaluation: Motivational Interviewing Use and Barriers to Use in Lifestyle Counseling Interventions

You are being asked to participate in a research study on the use of Motivational Interviewing (MI) in Sage*Plus* lifestyle counseling interventions. We ask that you read this form before agreeing to participate in this evaluation. This evaluation is being conducted by Diane Witt, along with three graduate student researchers Jeremy Waldo, Heidi Sannes, and Joan Grotewold.

Purpose

The purpose of this project is to assist the Minnesota Department of Health evaluate the use of MI in the Sage*Plus* program and determine if there are any barriers to the use of MI. This information will be utilized to enhance MI training and support for health care professionals who are providing the Sage*Plus* lifestyle counseling interventions.

Procedures

If you agree to participate in this research and sign this consent form we ask you to complete two questionnaires, which will take about 10-15 minutes of your time, as well as allowing direct observation of a minimum of two Sage*Plus* lifestyle counseling appointments.

Risks and Benefits

You will be asked personal questions about your age, education, profession, your current job, how your MI training, your beliefs about the use of MI and any barriers you perceive that impact your use of MI. You can choose not to answer any or all of these questions. This information may help to enhance the MDH sponsored MI continuing education training program to better meet the needs of the Sage*Plus* healthcare providers.

Confidentiality

The records of this study will be kept private. The only people who will see this information will be the researchers and the MDH. Your information, name, and place of employment will be kept confidential. There will be no way to identify you or your individual responses in any report of this study. The questionnaires and lifestyle counseling evaluations will be kept in a locked office at Minnesota State University, Mankato for 2 years and then destroyed. Only the researchers and MDH will have access to these files.

Voluntary nature of study

Participating in this study is entirely voluntary. Your decision whether or not to participate will not impact your current employment or relationship with the MDH. If you decide to participate, you may withdraw at any time.

Contact

If you have questions about this study, you may contact Dr. Diane Witt who is the researcher conducting this study at Minnesota State University, Mankato at 507-389-1725. If you have any questions or concerns about the treatment of human subjects contact: MSU IRB Administrator, Dr. Terrance Flaherty, Minnesota State University, Mankato, Institutional Review Board, 115 Alumni Foundation, (507) 389-2321.

I have read the above information and understand that this survey is voluntary and I may stop at any time. I consent to participate in the study.

Signature of Participant

Date

Signature of Researcher

Date

- Participant received a copy.

APPENDIX D

PATIENT CONSENT TO OBSERVE PROVIDER SCRIPT

I am a Family Nurse Practitioner student at Minnesota State University, Mankato. I am here today to observe how (name of provider) does the Sage*Plus* appointments. Is it okay with you if I stay and observe them?

APPENDIX E
BEHAVIOUR CHANGE COUNSELING INDEX

Behaviour Change Counselling Index (BECCI; Lane, 2002)

BECCI is an instrument designed for trainers to score practitioners' use of Behaviour Change Counselling in consultations (either real or simulated). To use BECCI, circle a number on the scale attached to each item to indicate the degree to which the patient/practitioner has carried out the action described.

Before using BECCI, please consult the accompanying manual for a detailed explanation of how to score the items. As a guide while using the instrument, each number on the scale indicates that the action was carried out:

0. Not at all
1. Minimally
2. To some extent
3. A good deal
4. A great extent

Item	Score
1. Practitioner invites the patient to talk about behaviour change Not Applicable <input type="checkbox"/>	not at all a great extent 0 1 2 3 4
2. Practitioner demonstrates sensitivity to talking about other issues	not at all a great extent 0 1 2 3 4
3. Practitioner encourages patient to talk about current behaviour or status quo	not at all a great extent 0 1 2 3 4
4. Practitioner encourages patient to talk about change	not at all a great extent 0 1 2 3 4
5. Practitioner asks questions to elicit how patient thinks and feels about the topic	not at all a great extent 0 1 2 3 4
6. Practitioner uses empathic listening statements when the patient talks about the topic	not at all a great extent 0 1 2 3 4
7. Practitioner uses summaries to bring together what the patient says about the topic	not at all a great extent 0 1 2 3 4
8. Practitioner acknowledges challenges about behaviour change that the patient faces	not at all a great extent 0 1 2 3 4
9. When practitioner provides information, it is sensitive to patient concerns and understanding Not Applicable <input type="checkbox"/>	not at all a great extent 0 1 2 3 4
10. Practitioner actively conveys respect for patient choice about behaviour change	not at all a great extent 0 1 2 3 4
11. Practitioner and patient <i>exchange</i> ideas about <i>how</i> the patient could change current behaviour (<i>if applicable</i>) Not Applicable <input type="checkbox"/>	not at all a great extent 0 1 2 3 4

Practitioner BECCI Score: _____

Practitioner speaks for (approximately):-

More than half the time About half the time Less than half the time

APPENDIX F
PREVENTIVE MEDICINE ATTITUDES AND ACTIVITIES
QUESTIONNAIRE (MODIFIED)

Preventive Medicine Attitudes and Activities Questionnaire (modified) (PMAAQ)

How **effective** are you in changing your patients' behavior with respect to:

	Very effective	Moderately effective	Somewhat effective	Minimally effective	Do not counsel
1. exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. healthy diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. smoking cessation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In general, how **important** is it for providers to **counsel** patients about the following?

	Very important	Moderately important	Somewhat important	Not very important
4. exercise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. healthy diet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. smoking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

To what extent do you **agree** with each of the following statements:

	Strongly agree	Somewhat agree	Neither agree nor disagree	Somewhat disagree	Strongly disagree
7. Smoking cessation counseling is an effective use of my time as a provider.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. For most patients health education does little to promote their adherence to a healthy lifestyle.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I am less effective than professional Counselors in getting patients to quit smoking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Patients without symptoms will rarely change their behavior on the basis of my advice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Most patients try to change their lifestyle if I advise them to do so.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I am satisfied in my current job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. It is difficult for patients to make lifestyle changes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. It is difficult to understand why patients can't meet the goals they have set with you.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I feel I have had a sufficient amount of training in MI.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I am able to identify the stage of change the patient is in to start applying MI.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. It has been difficult to change my routine of lifestyle counseling to include MI.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Patients prefer being told what to do over helping to come up with a plan themselves.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. It is difficult for patients to adhere to their commitment to making lifestyle changes, despite being motivated at the start.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Doing lifestyle counseling using MI takes longer than traditional methods.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In your clinical practice, how significant are the following potential **barriers** to effective use of Motivational Interviewing (MI) when doing **SagePlus** lifestyle counseling?

	Not significant	Minimally significant	Somewhat significant	Moderately significant	Very significant
21. lack of time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. personal motivation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. lack of patient interest in prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. lack of insight of patient on importance of making healthy lifestyle changes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. patients belief of what their friends & family tell them over what you say	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. lack of proper patient education materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. the patient's physical or financial restrictions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. education level of patient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. communication difficulties with patients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. cultural differences between doctors and patients	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. lack of knowledge on how to use MI for lifestyle counseling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. insufficient training on how to use MI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. insufficient knowledge of nutrition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. fear of sounding judgmental	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. number of visits with each patient	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. other (list)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX G
PERMISSION LETTER FOR TOOL

From: Mark Yeazel [yeazel@umn.edu]
Sent: Wednesday, February 09, 2011 4:11 PM

Subject: Re: PMAAQ

I consider it absolutely OK to modify the PMAAQ to better fit your needs.
Good luck and please let me know about your results.

Mark Yeazel

On 2/8/2011 10:51 PM

APPENDIX H
DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

Location: _____ Subject # _____ Student Researcher: _____

1. Age: _____

2. Sex: ___ 1. Male ___ 2. Female

3. Highest Degree Completed:

___ 1. RN (BSN)	___ 4. PA
___ 2. RN (ADN)	___ 5. MD or DO
___ 3. APN (FNP, ANP, GNP, etc.)	___ 6. Other _____

4. Employment:

___ 1. Fulltime	___ 3. Casual call
___ 2. Part-time	___ 4. Other _____

5. Number of years working in Healthcare: _____

6. Number of years working with Sage*Plus* clients: _____

7. Number of years at current clinic: _____

8. Do you use Motivational Interviewing (MI) when providing lifestyle counseling?

___ 1. Yes ___ 2. No

9. What MDH-sponsored MI training have you participated in? (Check all that apply.)

___ One day Continuing education seminar	Number of hours _____	Year(s) attended _____
___ Two-day Continuing education seminar	Number of hours _____	Year(s) attended _____
___ Video/Self-study	Number of hours _____	Year(s) attended _____
___ Other _____		

10. What was the format of MDH-sponsored MI training you attended? (Check all that apply.)

___ Role play
 ___ Lecture
 ___ Watching Video
 ___ Round table discussion
 ___ Other _____

11. Additional MI training you have participated in: (Check all that apply.)

___ Class/Seminar	Year(s) attended _____	
___ Self-study	Year(s) attended _____	
___ Webinar	Year(s) attended _____	
___ Other _____	Year(s) attended _____	

APPENDIX I
DEMOGRAPHIC TABLE

Participant Demographics

	N	%	Mean	SD	Range
Age	15	-	45	13.73	25-66
Years working in Healthcare	16	-	18	11.27	3-35
Years working SagePLUS	16	-	3.01	2.69	.5-10
Years at current clinic	14	-	5.01	4.46	.75-16
Gender					
Male	1	6.3	-	-	-
Female	15	93.7	-	-	-
Employment					
Full-time	8	50	-	-	-
Part-time	5	31.3	-	-	-
Casual Call	1	6.3	-	-	-
Other	2	12.5	-	-	-
Highest Degree Completed					
RN (BSN)	5	31.3	-	-	-
RN (ADN)	1	6.3	-	-	-
LPN	1	6.3	-	-	-
CHW	1	6.3	-	-	-
MPH	1	6.3	-	-	-
BA	3	18.8	-	-	-
BS	1	6.3	-	-	-